

Table of Contents

ANNEX H HEALTH AND SAFETY	H - 2
APPLICABLE REGULATIONS	H - 2
APPENDIX I SITE SAFETY	H - 2
APPENDIX II RESPIRATORY PROTECTION	H - 5
APPENDIX III TRAINING REQUIREMENTS	H - 6
OCCASIONAL/REGULAR SITE WORKER OSPR OIL SPILL HEALTH AND SAFETY COURSE CURRICULUM	H - 7
REGULATIONS: EMPLOYEE AND EMPLOYER ROLES AND RESPONSIBILITIES	H - 7
OPERATIONAL ACTIVITIES: UNDER THE UNIFIED INCIDENT COMMAND SYSTEM	H - 8
SITE HEALTH AND SAFETY PLAN FOR OIL SPILLS	H - 8
HAZARD COMMUNICATION	H - 8
ANIMAL HANDLING TECHNIQUES	H - 9
OIL SPILL CLEANUP TECHNIQUES	H - 9

ANNEX H HEALTH AND SAFETY

- (a) 29 CFR 1910.120 HAZWOPER
- (b) 8 CCR 5192 HAZWOPER
- (c) OSHA CPL 2-2.51 Post Emergency Response Operations
- (d) CAL OSHA memo dtd 25 NOV 1992

APPLICABLE REGULATIONS

The regulations regarding Hazardous Waste Operations and Emergency Response (HAZWOPER), references (a) and (b), apply to: a) cleanup operations, required by a governmental body, involving hazardous substances, that are conducted at uncontrolled hazardous waste sites, and b) emergency response operations for releases of, or substantial threats of release of, hazardous substances without regard to the location of the hazard; unless the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility for employee exposure to safety or health hazards. These regulations also define crude oil, fuel oils no. 1,2,4,5,6, aviation fuel, and gasoline as hazardous substances. An uncontrolled hazardous waste site is defined as, “an area identified as an uncontrolled hazardous waste site by a governmental body, whether Federal, state, local, or other, where an accumulation of hazardous substances creates a threat to the health and safety of the individuals or the environment or both.” OSHA considers an area impacted by an oil spill as an uncontrolled hazardous waste site.

Most oil spill emergency response and cleanup operations will fall within the scope of the HAZWOPER regulations. Any governmental agency or private employer involved in such operations, should comply with HAZWOPER regulations to the greatest extent possible as a matter of pre-planning, in order that a response to an actual situation may be safe, timely, and effective. Therefore, it is prudent for each employer to take action to meet as many of the requirements of the HAZWOPER regulations before an incident occurs. Some of the specific items that can be done, partially or completely, prior to an incident are, written standard operating procedures and work plans, written emergency response plan, written site safety plan, general site worker safety and health training, respiratory protection training, emergency responder training, medical surveillance program, written personal protective equipment program, site monitoring strategies, decontamination procedures.

Operations falling within the scope of the HAZWOPER regulations are not excluded from the requirements of other safety regulations found in title 8 of the California Code or title 29 of the Federal Code, such as hazard communications, respiratory protection, occupational noise exposure, benzene, injury illness prevention, and others.

APPENDIX I SITE SAFETY

Any scenario for a large oil spill will usually begin as an emergency response. Section (q) of references (a) & (b) covering employers whose employees are engaged in emergency response, requires that an emergency response plan be developed and implemented to handle anticipated emergencies prior to the commencement of emergency response operations. The first emergency response organization on scene must therefore develop and implement this plan. When other employers become involved in the emergency response the emergency response plans should be modified to cover their employees. Each employer must provide written draft of those sections which contains information specific to their employees and their duties.

The vast majority of large oil spills in the marine environment will generate cleanup operations separate from the emergency operation and ultimately the associated emergency response will be downgraded to a post-emergency response. These cleanup operations and post-emergency response operations will be subject to sections (b) through (o) of references (a) & (b) and require site safety plans. Therefore both an emergency response plan and a site safety plan is usually required. Since the two plans have many common elements and an emergency response plan is required as part of the site safety plan, it would be prudent to develop a combined plan.

A plan which uses the combined site safety and emergency response plan was written by the California Department of Fish and Game Office of Oil Spill Prevention and Response. Their plan, titled "Site Safety Plan for Emergency Response and Clean-up Activities of Petroleum Chemical Releases in California", was distributed with the state's Guidance Document for use in the preparation of Marine Facility and Vessel Oil Spill Contingency Plans - Workforce Safety Training Requirements. This plan is recommended as a model to other response organizations.

A large spill in the marine environment may impact several physically separated sites. Therefore, it may be more convenient to treat these sites independently when writing and maintaining site safety and emergency response plans.

The following is a list of specific requirements, from references (a) & (b), that must be met prior to initial site entry or before an individual employee is allowed on site.

- 1) Employees who are expected to become involved in cleanup operations must be trained in accordance with section (e) before being permitted to participate in such operations.
- 2) Employees who are expected to wear a respirator must be covered under a respiratory protection program.
- 3) Employees must be enrolled in a medical surveillance program if:
 - a) they are or may be exposed to hazardous substances or health hazards at or above the permissible exposure limits for 30 days or more a year,
 - b) they wear a respirator for 30 days or more a year,
 - c) they are injured, become ill, or develop signs or symptoms due to possible overexposure involving hazardous substances,
 - d) they are a member of a HAZMAT team.
- 4) Required medical examinations and consultations must be made available by the employer to the employee prior to assignment.
- 5) The emergency response plan and/or site safety plan must be written prior to initial site entry.
- 6) Employees who are required to wear a respirator while working at a hazardous waste site must have received 40 hours off-site instruction before they are permitted to engage in hazardous waste operations. In addition they must receive three days actual field experience under the direct supervision of a trained, experienced supervisor.
- 7) Employees who are not required to wear a respirator and are unlikely to be exposed above permissible exposure limits while working at a hazardous waste site must have received 24 hours off-site instruction before they are permitted to engage in hazardous waste operations. In addition they must receive one day actual field experience under the direct supervision of a trained, experienced supervisor.
- 8) The SSHP shall provide for pre-entry briefings to be held prior to initiating any site activity and at such times as necessary to ensure that employees are apprised of the SSHP.
- 9) A preliminary evaluation of a site's characteristics shall be performed prior to site entry.
- 10) Required Information. The following information to the extent available shall be obtained by the employer prior to allowing employees to enter a site:

- a) Location and approximate size of the site.
 - b) Description of the response activity and/or the job task to be performed.
 - c) Duration of the planned employee activity.
 - d) Site topography and accessibility by air and roads.
 - e) Safety and health hazards expected at the site.
 - f) Pathways for hazardous substance dispersion.
 - g) Present status and capabilities of emergency response teams that would provide assistance to hazardous waste cleanup site employees at the time of an emergency.
 - h) Hazardous substances and health hazards involved or expected at the site, and their chemical and physical properties.
- 11) Appropriate site control procedures shall be implemented to control employee exposure to hazardous substances before cleanup work begins. The site control program shall include as a minimum: a site map; site work zones; the use of a buddy system; site communications including alerting means for emergencies; the standard operating procedures or safe work practices; and identification of the nearest medical assistance.
 - 12) A decontamination procedure shall be developed, communicated to employees and implemented before any employees or equipment may enter areas on site where potential for exposure to hazardous substances exists.
 - 13) An emergency response plan shall be developed and implemented by all employers ... prior to the commencement of hazardous waste operations.

The following requirements pertain to initial entry.

- 1. PPE for initial site entry must be appropriate for the hazards identified during the preliminary evaluation.
- 2. During initial site entry, if positive pressure self contained breathing apparatus is not used, and if respiratory protection is warranted by the potential hazards identified during the preliminary site evaluation, an escape self-contained breathing apparatus of at least 5 minutes duration shall be carried by employees during initial site entry.
- 3. If the preliminary site evaluation does not produce sufficient information to identify the hazards or suspected hazards of the site, an ensemble providing protection equivalent to level B PPE shall be provided as minimum protection, and direct reading instruments shall be used as appropriate for identifying IDLH conditions.
- 4. During initial site entry when the preliminary site evaluation produces information that shows the potential for IDLH conditions, or when the site information is not sufficient reasonably to eliminates these possible conditions, monitoring the air with appropriate direct reading test equipment for IDLH and other conditions that may cause death or serious harm shall be conducted.

APPENDIX II RESPIRATORY PROTECTION

All workers that are required or allowed to wear a respirator during an emergency response or cleanup operation must be covered under an employer's respiratory protection program that meets the requirements of reference (c) and have received appropriate training as required in references (a), (b), and (c). Under the HAZWOPER regulations, the worker would require 40 hours of hazardous waste operations site safety and health training.

APPENDIX III TRAINING REQUIREMENTS

All individuals responsible for responding to an oil spill must meet the health and safety requirements mandated in regulations by both State and Federal Occupational Safety and Health Administrations (OSHA). The amount of health and safety training required for each individual to respond to an oil spill will depend upon: the kind of tasks performed, the degree of exposure encountered, and the type of operation (emergency response vs post-emergency cleanup). Training shall be conducted by a qualified instructor and certified in writing upon completion. Proof of proper health and safety training will be required for each individual requesting entrance to the spill site. Proof of training should include: name of training class, hours of training received, dates of class, signature of the administrator of the employer's health and safety program, and description of course material covered in the class.

The initial training requirements for workers involved in the cleanup of uncontrolled hazardous waste sites and post-emergency response operations is summarized below.

1. General/Occasional Site Workers exposed above the PELs and/or required to wear respirators - 40 hours off-site and three days (24 hrs) actual field experience under the supervision of a trained supervisor.
2. General/Occasional Site Workers exposed below PELs and not required to wear respirators - 24 hours off-site and one day (8 hrs) actual field experience under the supervision of a trained supervisor.
3. Management and Supervisors of workers exposed below PELs and not required to wear respirators - 24 hours off-site plus 8 hours specialized training and one day actual field experience under supervision of a trained supervisor.
4. Management and Supervisors of workers exposed above PELs and/or required to wear respirators - 40 hours off-site plus 8 hours specialized training and three days actual field experience under supervision of a trained supervisor.
5. Although there is no provision in references (a) or (b), Federal OSHA and CAL OSHA have both stated in references (c) and (d) respectively, that during the post-emergency response cleanup of an oil spill, for job duties and responsibilities with a low magnitude of risk, a minimum of 4 hours site safety and health training may be appropriate. Neither agency has granted a blanket exclusion but has allowed the FED OSHA representative to the RRT to make the determination based on an assessment of the cleanup operation. Some of the criteria considered in this decision are:
 - a) This is the workers first involvement in post-emergency response or cleanup operations and it is unlikely the worker will be involved in response activities in future incidents.
 - b) Cleanup is performed in an area that has been monitored and fully characterized by a qualified person indicating that exposures are presently and can be expected to remain under permissible exposure limits and other published exposure limits.
 - c) Health risks from skin absorption are minimal.
6. Employers who can show by documentation or certification that an employee's work experience and/or training has resulted in training equivalent to that required in references (a) and (b) shall not be required to provide the initial training to such employees and shall provide a copy of the certification or documentation to the employee upon request.

The training curriculum for the four hour training course provide to the onetime workers described in section III.5., must include:

- emergency response plan/site safety plan
- hazard communications
- decontamination procedures
- water safety
- hypothermia
- heat stress
- safety hazard controls
- personal protective equipment
- other safety training as needed

At a large oil spill, special groups of workers such as the California Conservation Corp, environmental groups, and vessels of opportunity may participate in the response and/or cleanup. These groups are identified in advance for emergency planning purposes and are likely to become involved as often as needed. Therefore, they must receive 24 or 40 hours of off-site training and appropriate supervised field experience depending on the potential level of exposure to hazardous substances. The Office of Oil Spill Prevention and Response (OSPR) intends to provide 24 hours of training to members of these groups. OSPR has developed a curriculum, for this 24-hour training. This curriculum, shown at the end of this annex, is recommended as a guide for developing other training programs. These workers may not enter an environment where they may be exposed above permissible exposure limits nor may they be required or allowed to wear respirators during response or cleanup operations unless 16 additional hour of off-site training and 16 additional hours of supervised field experience is provided.

Eight hours of refresher training is required annually for all site workers, managers, and supervisors. CAL OSHA has further interpreted this to mean that if a worker does not receive refresher training by each anniversary date of the completion of initial training, the initial training must be repeated.

OCCASIONAL/REGULAR SITE WORKER OSPR OIL SPILL HEALTH AND SAFETY COURSE CURRICULUM

REGULATIONS: EMPLOYEE AND EMPLOYER ROLES AND RESPONSIBILITIES

- T8, CCR, Section 5192 HAZWOPER
- Fed/OSHA Directive CPL 2-2.51 Post-Emergency Response Operations
- T8, CCR, Section 3203 Injury Illness Prevention Program
- T8, CCR, Section 3204 Access to Employee Exposure and Medical Reports
- T8, CCR, Section 3220 Emergency Action Plan
- T8, CCR, Section 3383 Body Protection
- T8, CCR, Section 3384 Hand Protection
- T8, CCR, Section 3385 Foot Protection
- T8, CCR, Section 3389 Life Rings and Personal Flotation Devices
- T8, CCR, Section 3400 Medical Services and First Aid
- T8, CCR, Section 5095-5100 Hearing Conservation Program
- T8, CCR, Section 5155 Airborne Contaminants
- T8, CCR, Section 5162 Emergency Eyewash and Shower Equipment
- T8, CCR, Section 5194 Hazard Communication
- Labor Code: Section 142.7 Hazardous Substance Removal
- Labor Code: Section 6100 Workers' Compensation
- Labor Code: Section 6300 Jurisdiction and Duties of the

- Occupational Safety and Health Act
- Labor Code: Section 6400 Health and Safety Responsibilities of Employees and Employers
- T8, CCR, Section 5157 Confined Spaces (Recognition of Confined Space Hazards)
- T8, CCR, Section 341 (Recognition of Shoring and Excavation Hazards)
- T8, CCR, Section 3661 and 3664 Industrial Trucks, Tractors, Haulage Vehicle and Earthmoving Equipment (Recognition of Heavy Equipment Operation Hazards During Oil Spill Cleanup Operations)

OPERATIONAL ACTIVITIES: UNDER THE UNIFIED INCIDENT COMMAND SYSTEM

- Communication and coordination with any and all agencies having authorized activities dealing with oil spills (roles and responsibilities).
- Local contingency plans jurisdiction when dealing with oil spills. Discussion of purpose, components, value and limitations of pre-event and event specific planning.
- Incident Command System and unified version, describe the basic implementation and how it manages an oil spill and demonstrate proper information flow from ICS staff to the incident commander.

SITE HEALTH AND SAFETY PLAN FOR OIL SPILLS

- Site Description
- Hazard Identification and Recognition
- Personal Protective Equipment
- Hazard Evaluation/Risk Identification
- Exposure Monitoring Program (General area and breathing zone)
- Onsite Control
- Decontamination
- Safe Distances and Places of Refuge
- Evacuation Routes and Procedures
- Emergency Medical Treatment/First Aid
- Emergency Alert and Response Procedures

HAZARD COMMUNICATION

- Health Effects and Chemistry of Oil (Benzene, Toluene, Xylene, Hydrogen Sulfide, Diesel Fuel, Gasoline, Crude Oil, Bunker C, MTBE, etc.)
- Thermal Stress
- Water Safety (Personal Flotation Devices)
- Physical Hazards (including electrical, heavy equipment, confined spaces, trenches, shoring, excavation, etc.)
- Biological Hazards
- Slips, Trips, and Falls

- Ergonomics
- Hearing Conservation
- Workers' Compensation
- Accident Prevention and Reporting

ANIMAL HANDLING TECHNIQUES

- Occupational health and safety hazards associated with the capture, transport, cleaning, rehabilitation, and release of oiled marine wildlife:
 - a. Required personal protective equipment
 - b. Decontamination of personal protective equipment
 - c. Slips, trips, and falls (e.g. mob cart)
 - d. Safe lifting and handling techniques of large mammals
 - e. Water safety during capture and release of animals
 - f. Bites, pecks, and scratches
 - g. Zoonosis

OIL SPILL CLEANUP TECHNIQUES

- Health and safety hazards associated with manual oil cleanup activities
- Safe work practices with oil cleanup tools and equipment